Amendments to the Claims:

The present application was filed with two claims, each inadvertently numbered 17, and no Claim 22. Applicants have amended the claim numbering, renumbering the second claim originally designated 17 to 18 and renumbering claims originally designated 18, 19 20, and 21 to 19, 20, 21, and 22 respectively. The listing of claims below depicts the claims with the new numbering.

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (Currently Amended): A flexible ablation system for ablation of biological tissue at a target tissue site, comprising:

a handle portion;

a tubular member having proximal and distal portions and a longitudinal axis which, at a point just proximal to the distal portion, defines an approach ~~azimuth~~ angle with respect to a surface of the target tissue, the handle portion operably attached to the proximal portion of the tubular member;

at least one ablation element operably disposed at the distal portion of the tubular member, the at least one ablation element adapted to emit ablative energy; and

a means for deflecting the distal portion of the tubular member,

wherein the distal portion of the tubular member is configured to be deflected to a predetermined shape wherefrom a desired energy pattern is emitted, whereby at least a portion of the target tissue is ablated ~~which is~~ substantially independent of the approach ~~azimuth~~ angle.

Claim 2 (Original): The system of claim 1 further comprising a means for directionally controlling ablative energy emitted from the at least one ablation element.

Claim 3 (Original): The system of claim 2, wherein the means for directionally controlling ablative energy is flexible, whereby the directionally controlling means deflects as the distal portion of the tubular member is deflected.

Claim 4 (Original): The system of claim 3, wherein the means for directionally controlling the ablative energy allows for the emission of energy in a radial pattern, substantially 180 degrees about the longitudinal axis of the distal portion.

Claim 5 (Original): The system of claim 4, wherein the means for directionally controlling the ablative energy comprises a shield device adapted to be opaque to at least a portion of the ablative energy emitted, whereby a portion of biological tissue adjacent to the distal portion of the ablation system is shielded from the ablation energy.

Claim 6 (Original): The system of claim 5, wherein the shield member reflects at least a portion of the ablative energy in a direction toward the target tissue site.

Claim 7 (Original): The system of claim 6, wherein the geometric surface of the shield member along a longitudinal axis is substantially planar.

Claim 8 (Original): The system of claim 6, wherein the geometric surface of the shield member along a longitudinal axis comprises at least one curved portion corresponding to a desired ablation pattern.

Claim 9 (Original): The system of claim 8, wherein the shield member is substantially convex with respect to the longitudinal axis of the ablation system, the ablative energy being longitudinally dispersed across a target tissue site.

Claim 10 (Original): The system of claim 8, wherein the shield member is substantially concave with respect to the longitudinal axis of the ablation system, the ablative energy being longitudinally focused upon a target tissue site.

Claim 11 (Original): The system of claim 1, wherein the at least one ablation element is flexible, whereby the at least one ablation element deflects as the distal portion of the tubular member is deflected.

Claim 12 (Original): The system of claim 11, wherein the at least one ablation element is an antenna adapted to emit electromagnetic energy.

Claim 13 (Original): The system of claim 12, wherein the antenna is one selected from the group consisting of: a linear antenna, a helical antenna, a monopole antenna, and a lossy transmission line.

All Cont.

Claim 14 (Original): The system of claim 11, wherein the at least one ablation element is an electrode having the form of a helical spring.

Claim 15 (Original): The system of claim 1, wherein the ablative energy is one or more energies selected from the group consisting of: microwave, laser or other forms of light energy in both the visible and non-visible range, radio frequency (RF), ultrasonic, cryogenic, thermal, and chemical.

Claim 16 (Original): The system of claim 1, wherein the deflection means comprises at least one pull wire operably attached to a distal end of the distal portion of the tubular member and the handle portion.

Claim 17 (Original): The system of claim 16, wherein the distal portion of the tubular member is generally linear, translation of the at least one pull wire results in deflection of the distal portion between a linear configuration and a deflected configuration.

Claim [[17]] <u>18</u> (Currently Amended): The system of claim 16, wherein the distal portion of the tubular member is preformed, translation of the at least one pull wire results in deflection of the distal portion between a preformed configuration and a linear configuration.

Claim [[18]] 19 (Currently Amended): The system of claim 1, wherein the predetermined shape is curvilinear.

Claim [[19]] 20 (Currently Amended): The system of claim 1, wherein the predetermined shape is substantially circular.

Claim [[20]] 21 (Currently Amended): The system of claim [[19]] 20, wherein the predetermined shape has a radius of from about 0.5 cm. to about 5 cm.

Claim [[21]] 22 (Currently Amended): The system of claim 15, further comprising a means for steering the distal portion of the tubular member, the steering means operably attached to the tubular member and the handle portion,

wherein operation of the steering means effects a change in the approach ~~azimuth~~ angle.

Claim 23 (Original): The system of claim 16 further comprising a guiding member having at least one lumen passing therethrough and including a means for steering the distal portion of the tubular member, the tubular member translatably disposed within a first of the at least one lumen,

wherein operation of the steering means effects a change in the azimuth angle while the tubular member is free to translate within the guiding member.

Claim 24 (Original): The system of claim 23, wherein the distal portion of the tubular member is preformed having a curvature of a predetermined radius,

whereby the distal portion of the tubular member assumes its preformed curvilinear shape as the tubular member translates out the distal opening of the guiding member.

Claim 25 (Original): The system of claim 24, wherein the predetermined radius is from about 1 cm. to about 5 cm.

Claim 26 (Original): The system of claim 23, wherein the deflection means comprises a springy member which acts to manipulate the distal portion of the elongated tubular member to the predetermined shape in response to a change in external forces acting thereupon.

Claim 27 (Original): The system of claim 26, wherein the springy member is a superelastic material.

Claim 28 (Original): The system of claim 18, wherein the distal portion of the tubular member further comprises at least one prebend of a predetermined angle located proximal to the at least one ablation element,

whereby the prebend cooperates with the distal opening of the guiding member and further deflects the distal portion of the tubular member as the tubular member translates out the distal opening of the guiding member.

Claim 29 (Currently Amended): A method of ablating tissue, comprising the steps of:

providing an ablation system comprising a tubular member having a longitudinal axis and a deflectable distal portion, the distal portion comprising at least one ablation element from which ablative energy is emitted, the distal portion being configured to be deflected to a predetermined shape wherefrom a relatively uniform energy pattern is emitted, the longitudinal axis of the tubular member immediately proximal to the distal portion and a surface of the target tissue surface defining an approach angle;

advancing the distal portion of the ablation system into a patient's body until the distal portion is near a target tissue site;

deflecting the distal portion of the ablation catheter, the distal portion assuming the predetermined shape;

advancing the distal portion of the ablation catheter until the distal portion is proximate the target tissue; and

applying ablative energy to the at least one ablation element to ablate the target tissue proximate the distal portion of the ablation catheter,

whereby the step of ablating the target tissue is performed substantially independent of the approach angle.

Claim 30 (Original): The method of claim 29, wherein the ablation of the target tissue results in the formation of at least one lesion as part of a desired lesion path.

Claim 31 (Original): The method of claim 29, wherein the ablation catheter further comprises a steering means operably attached to the ablation catheter proximal to the distal portion thereof and the method further comprises the step of operating the steering means such that the distal portion of the ablation catheter is moved from a first position to a second position.

Claim 32 (Original): The method of claim 31, wherein the first position and the second position overlap and the step of ablating results in the creation of a long continuous deep lesion corresponding to the first and second position.

Claim 33 (Currently Amended): A method for ablating a target tissue within a hollow body organ, the steps comprising:

providing an elongated tubular member having a means for deflecting a distal portion ~~end~~ thereof, the distal portion ~~end~~ including at least one ablation element, wherein operation of the deflection means results in the creation of a predetermined ~~desired~~ energy pattern about the distal portion ~~end~~ of the elongated tubular member;

advancing the distal portion ~~end~~ of the tubular member to a point where at least a portion of the distal portion ~~end~~ is within the hollow body organ;

operating the deflection means to deflect at least a portion of the distal portion ~~end~~ of the tubular member;

positioning at least a portion of the distal portion ~~end~~ of the tubular member proximate to the target tissue, the longitudinal axis of the tubular member immediately proximal to the distal portion thereof and a surface of the target tissue defining an approach ~~azimuth~~ angle therebetween; and

ablating at least a portion of the target tissue,

wherein the predetermined energy pattern is selected to allow ablation of the at least a portion of the target tissue substantially independent of the approach angle.

Claim 34 (Original): The method of claim 33, wherein the step of advancing the distal end comprises the step of advancing the distal end of the tubular member until the distal portion thereof is within the hollow body organ.

Claim 35 (Original): The method of claim 33, wherein the step of operating the deflection means results in the creation of a uniform energy pattern about the distal portion of the elongated tubular member such that the step of ablating occurs without respect to the azimuth angle.

Claim 36 (Original): The method of claim 33, wherein the azimuth angle is from about 0° to about 180°.

Claim 37 (Original): The method of claim 33, wherein the elongated tubular member further comprises a steering means and the step of positioning comprises the step of positioning at one of a plurality of positions.

Claim 38 (Original): The method of claim 37, wherein the plurality of positions define a continuous ablation path.

Claim 39 (Original): The method of claim 38, wherein the step of ablating results in the formation of a long continuous deep lesion along the ablation path.

Claim 40 (Currently Amended): An ablation system for ablating a hollow body organ, comprising:

an elongated tubular member having a means for deflecting a distal portion thereof, the longitudinal axis of the tubular member immediately proximal to the distal portion and the surface of a target tissue defining an approach angle therebetween; and

an ablation device operably disposed at the distal portion ~~end~~ of the elongated tubular member and including at least one ablation element adapted to emit ablative energy therefrom,

wherein operation of the deflection means results in the creation of a uniform energy pattern about the distal portion of the tubular member, whereby ablation of a portion of the target tissue occurs independent of the approach angle.

Claim 41 (Original): The system of claim 40 wherein deflection means comprises at least one pull wire having a distal end fixedly attached to the distal portion.

Claim 42 (Original): The system of claim 41, wherein the at least a portion of the at least one pull wire is operably located external and adjacent to the distal portion.

All Cont.

Claim 43 (Original): The system of claim 40, wherein the at least one ablation element is an antenna adapted to emit electromagnetic energy therefrom.

Claim 44 (Original): The system of claim 40, wherein the at least one ablation element is an electrode.

Claim 45 (Original): The system of claim 40, wherein the ablative energy is one or more energies selected from the group consisting of: microwave, laser or other forms of light energy in both the visible and non-visible range, radio frequency (RF), ultrasonic, cryogenic, thermal, and chemical.

Claim 46 (Currently Amended): A flexible ablation system, comprising:

a tubular member having proximal and distal portions and a longitudinal axis which, at a point just proximal to the distal portion, defines an approach ~~azimuth~~ angle with respect to a surface of the target tissue; and

at least one ablation element operably disposed at the distal portion of the tubular member, the at least one ablation element adapted to emit ablative energy; and

a means for shaping the distal portion of the tubular member,

wherein a desired energy pattern is emitted from the shaped distal portion, the energy pattern engaging a target tissue independent of the approach ~~azimuth~~ angle.

Claim 47 (Original): The system of claim 46, wherein the at least one ablation element is configured to emit ablative energy substantially perpendicular to the longitudinal axis of the tubular member.

Claim 48 (Currently Amended): An ablation system for ablating biological tissue, comprising:

a tubular member having a distal portion and a longitudinal axis;

at least one ablation element operably disposed at the distal portion of the tubular member and adapted to emit ablative energy in a substantially unidirectional ~~lateral~~ direction along the longitudinal axis of the tubular member; and

a means for deflecting at least the distal portion of the tubular member,

wherein upon deflection of ~~at least a portion of~~ the distal portion of the tubular member, a relatively uniform energy distribution is formed about the deflected portion, whereby ablation of biological tissue proximate to the distal portion occurs substantially independent of an approach angle defined by the longitudinal axis of the tubular member immediately proximate the distal portion and the biological tissue surface.

Claim 49 (Original): The system of claim 48, wherein the deflected portion is shaped to follow the natural contour of the biological tissue.

Claim 50 (Original): The system of claim 49, wherein the surface of the biological tissue is concave.

Claim 51 (Original): The system of claim 48, wherein the at least one ablation element is adapted to emit unidirectional ablative energy.

Claim 52 (Original): The system of claim 49, wherein the biological tissue is the isthmus between the inferior vena cava and the tricuspid valve.

Amendments to the Drawings:

The attached sheets of drawings includes changes to Figures 1A, 1B, 2A, 2B, 2C, 2D, 2E, 3A, 3B, 3C, 4A, 5A, 6A and 6B. The amendments are summarized as follows:

Figure 1A: Added identifier 22; Amended identifier L_1 to L; and Underlined identifiers 10, 14 and 16.

Figure 1B: Corrected the break line for item 110; and Underlined identifiers 10, 14 and 16.

Figure 2A: Underlined identifiers 10, 14 and 16.

Figure 2B: Underlined identifiers 10, 14 and 16.

Figure 2C: Added identifiers 10, 14, 16, 100, 102, 110, 124 and 126.

Figure 2D: Moved identifier 124 to proper location.

Figure 2E: Moved identifier 124 to proper location.

Figure 3A: Amended identifier 5A to SA; and Underlined identifiers 10, 14 and 16.

Figure 3B: Amended identifier 5A to SA; and Underlined identifiers 10, 14 and 16.

Figure 3C: Deleted identifier A; Amended identifier 5A to SA; and Underlined identifiers 10, 14 and 16.

Figure 4A: Amended identifier 5A to SA; Corrected identifier line of element 106; and Added identifier 130.

Figure 5A: Amended identifier 5A to SA; Added identifier 130; and Corrected identifier line of element 152.

Figure 6A: Added identifiers SA, 10, 10A, 150 and 152; Deleted erroneous line; and Corrected identifier lines for elements DA and 104.

Figure 6B: Added identifier 130.

Attachment: Replacement Sheets
Annotated Sheets Showing Changes